B CELL EPITOPE PREDICTION OF FUSION PROTEIN CODING GENE FROM LOCAL ISOLATES NEWCASTLE DISEASE VIRUS

Kevin

ABSTRACT

This study aimed to analyze the prediction of fusion protein epitope from NDV of local isolate. Organ samples from lung, proventrikulus, intestine and hepar collected from spotted dove in Legi Market, Ponorogo and native chicken in Wonokromo Market, Surabaya. Samples were grinded and then RNA were extracted and identified with RT - PCR using specific primary and reverse primers with target of 976 bp. Sequencing is done to get the nucleotide sequence and multiple alignment by using BioEdit ver software. 8.0. Analysis of B cell epitope F protein using IEDB software program online that is accessed freely using internet browser. NDV DNA PCR product as 976 bp. The results of the homology analysis shown that the samples compared to the La Sota, B1, and Komarov vaccine strains shown a percentage below 91% for the spotted dove sample and 92% for the native chicken sample and 98% homology between the sample of native chicken and spotted dove. It can be said that the NDV samples in this research may be original Indonesia, not from the vaccine strain. The result of epitope prediction analysis of B cell F protein of NDV, each sample from Surabaya has 18 candidates and from Ponorogo has 16 candidates of B cell epitope on protein F. It can be concluded prediction of epitope of B cell F protein NDV obtained from sample of Surabaya and Ponorogo can potentially be immunogen candidates that can be used as vaccine candidates.

Keywords : Newcastle disease, Fusion protein, Surabaya, Ponorogo